

FIG. 1

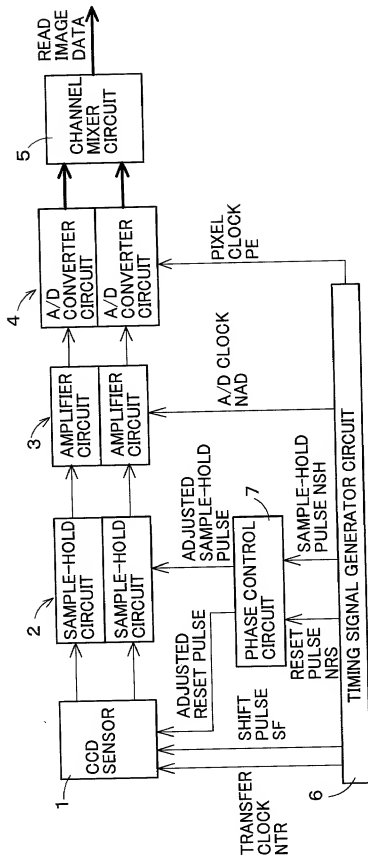


FIG. 2

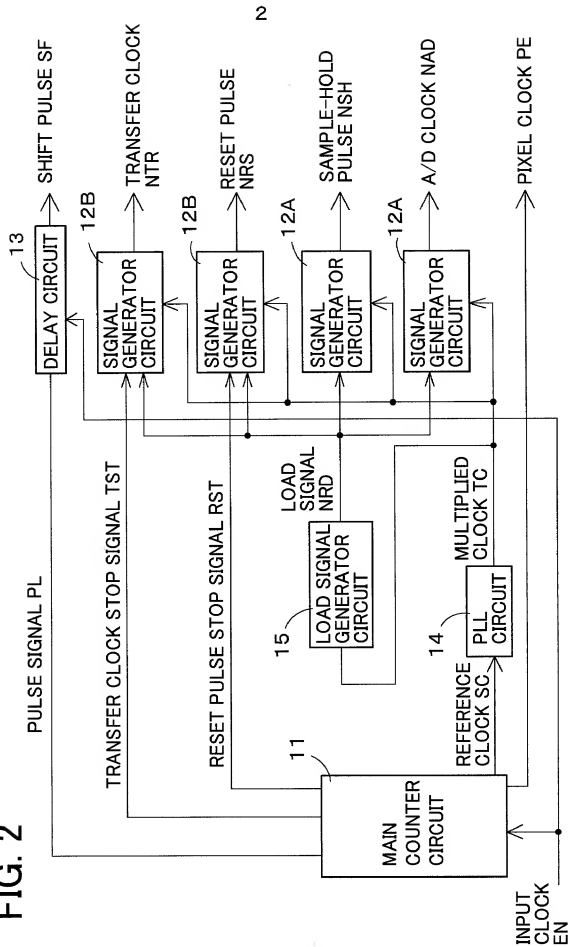


FIG. 3

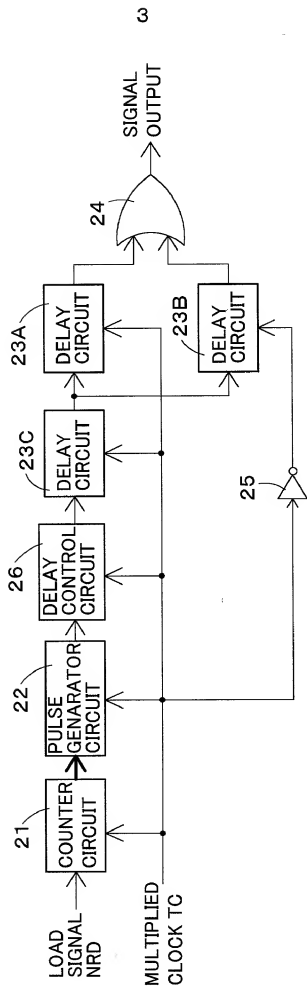


FIG. 4

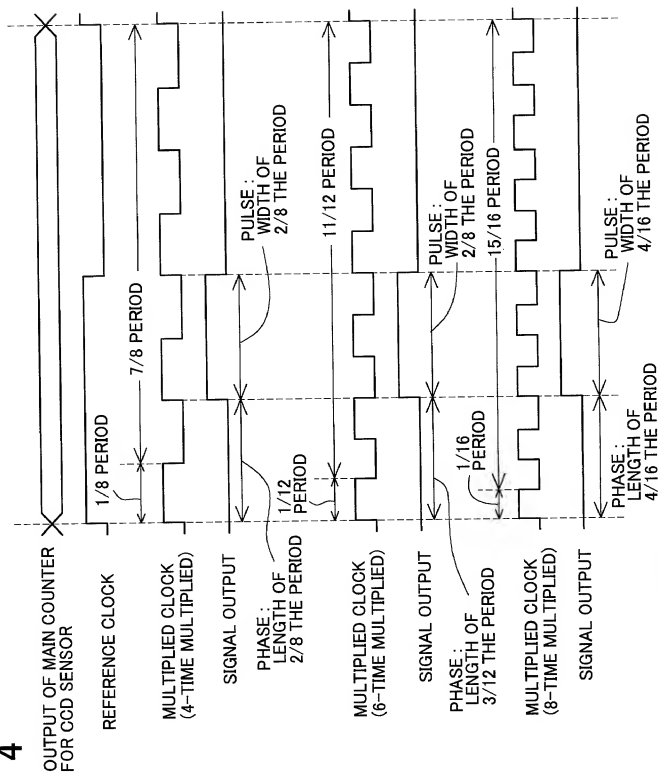


FIG. 5

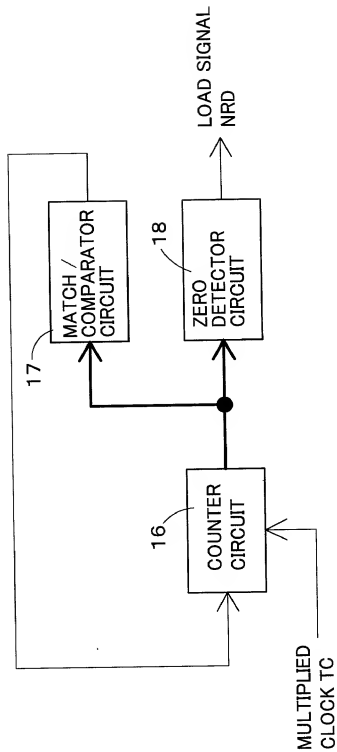


FIG. 6

RELATIONSHIP BETWEEN PHASE SETTING AND  
LOAD VALUE SETTING

PHASE LENGTH	LOAD VALUE
LENGTH OF $0/8 \sim 1/8$ THE PERIOD LENGTH OF $0/12 \sim 1/12$ THE PERIOD LENGTH OF $0/16 \sim 1/16$ THE PERIOD	0
LENGTH OF $2/16 \sim 3/16$ THE PERIOD	7
LENGTH OF $4/16 \sim 5/16$ THE PERIOD	6
LENGTH OF $2/12 \sim 3/12$ THE PERIOD LENGTH OF $6/16 \sim 7/16$ THE PERIOD	5
LENGTH OF $4/12 \sim 5/12$ THE PERIOD LENGTH OF $8/16 \sim 9/16$ THE PERIOD	4
LENGTH OF $2/8 \sim 3/8$ THE PERIOD LENGTH OF $6/12 \sim 7/12$ THE PERIOD LENGTH OF $10/16 \sim 11/16$ THE PERIOD	3
LENGTH OF $4/8 \sim 5/8$ THE PERIOD LENGTH OF $8/12 \sim 9/12$ THE PERIOD LENGTH OF $12/16 \sim 13/16$ THE PERIOD	2
LENGTH OF $6/8 \sim 7/8$ THE PERIOD LENGTH OF $10/12 \sim 11/12$ THE PERIOD LENGTH OF $14/16 \sim 15/16$ THE PERIOD	1

FIG. 7

RELATIONSHIP BETWEEN PULSE WIDTH SETTING  
AND COMPARATIVE VALUE SETTING

PULSE WIDTH	COMPARATIVE VALUE
WIDTH OF $2/8 \sim 3/8$ THE PERIOD WIDTH OF $2/12 \sim 3/12$ THE PERIOD WIDTH OF $2/16 \sim 3/16$ THE PERIOD	1
WIDTH OF $4/8 \sim 5/8$ THE PERIOD WIDTH OF $4/12 \sim 5/12$ THE PERIOD WIDTH OF $4/16 \sim 5/16$ THE PERIOD	2
WIDTH OF $6/8 \sim 7/8$ THE PERIOD WIDTH OF $6/12 \sim 7/12$ THE PERIOD WIDTH OF $6/16 \sim 7/16$ THE PERIOD	3
WIDTH OF $8/12 \sim 9/12$ THE PERIOD WIDTH OF $8/16 \sim 9/16$ THE PERIOD	4
WIDTH OF $10/12 \sim 11/12$ THE PERIOD WIDTH OF $10/16 \sim 11/16$ THE PERIOD	5
WIDTH OF $12/16 \sim 13/16$ THE PERIOD	6
WIDTH OF $12/16 \sim 15/16$ THE PERIOD	7

FIG. 8

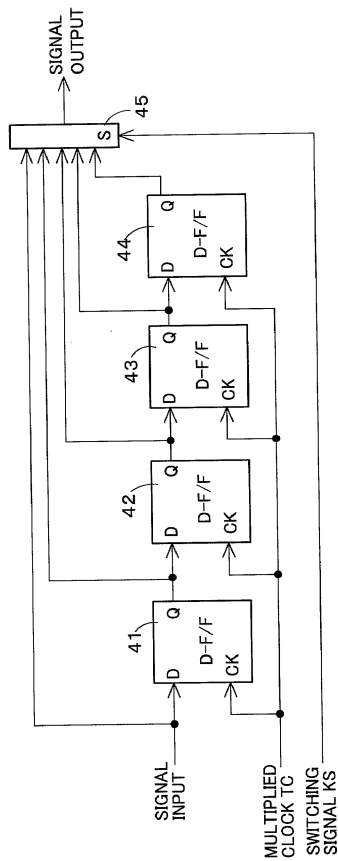




FIG. 9

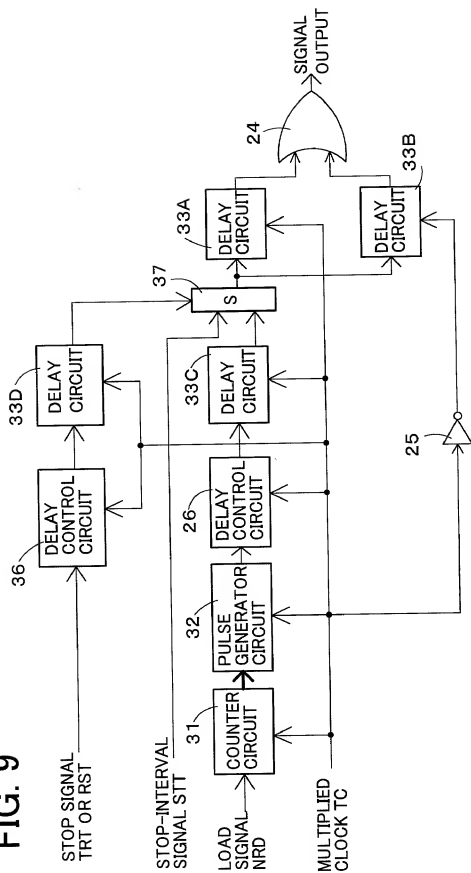


FIG. 10

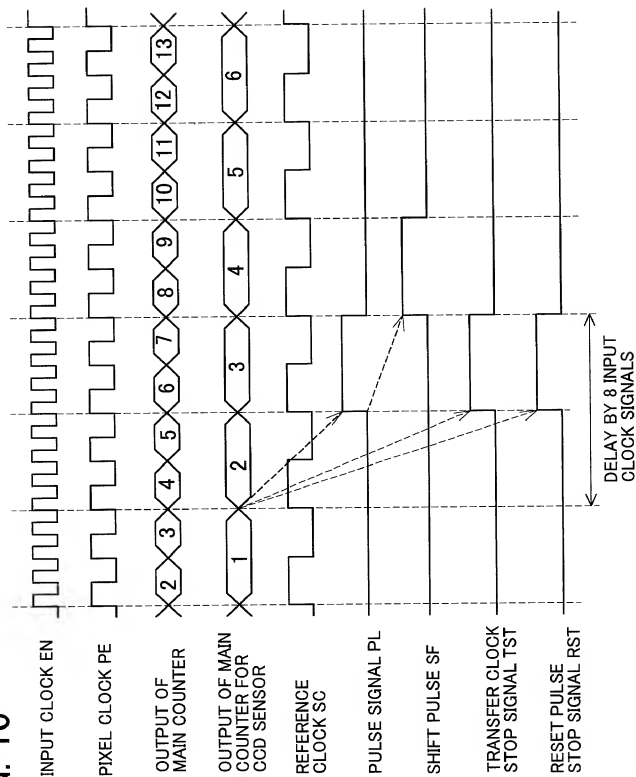


FIG. 11

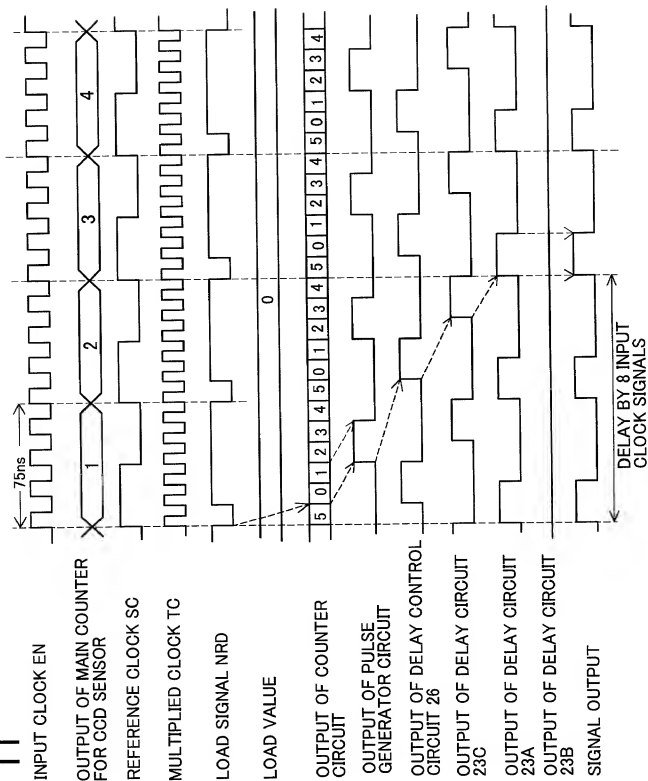
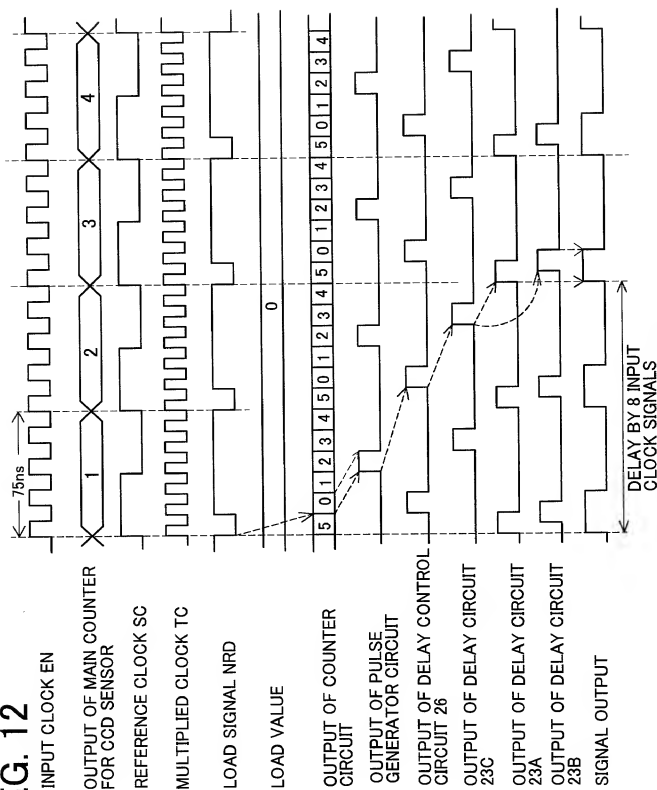


FIG. 12







# FIG. 15

15

INPUT CLOCK EN

OUTPUT OF MAIN  
COUNTER FOR CCD  
SENSOR

REFERENCE CLOCK SC

MULTIPLIED CLOCK TC

LOAD SIGNAL NRD

STOP SIGNAL

LOAD VALUE

OUTPUT OF COUNTER  
CIRCUIT

OUTPUT OF PULSE  
GENERATOR CIRCUIT

OUTPUT OF DELAY  
CONTROL CIRCUIT 26

OUTPUT OF DELAY  
CIRCUIT 33C

OUTPUT OF DELAY  
CONTROL CIRCUIT 36

OUTPUT OF DELAY  
CIRCUIT 33D

STOP-INTERVAL  
SIGNAL STT

OUTPUT OF SELECTOR

OUTPUT OF DELAY  
CIRCUIT 33A

OUTPUT OF DELAY  
CIRCUIT 33B

SIGNAL OUTPUT

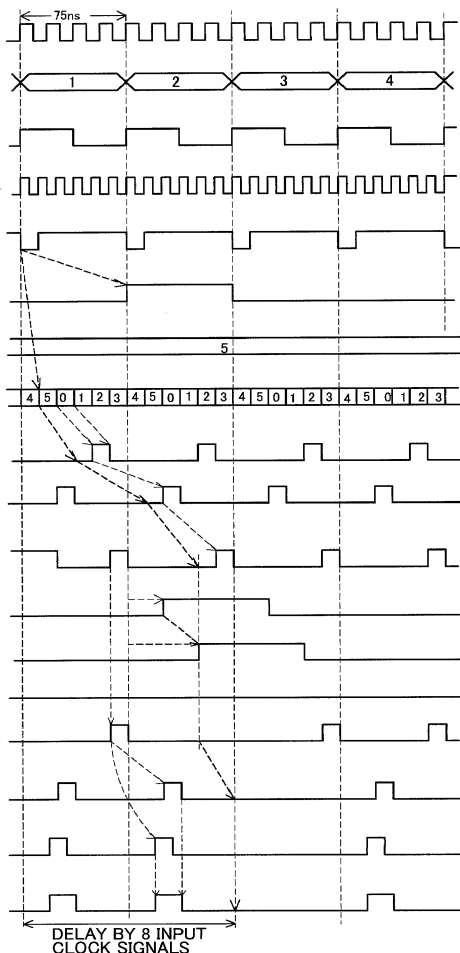


FIG. 16 PRIOR ART

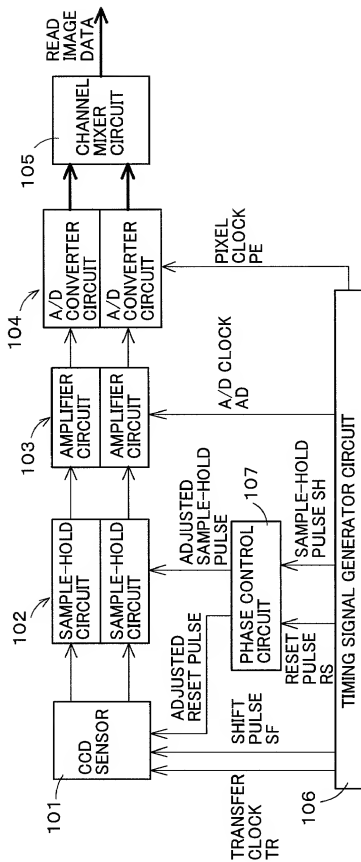




FIG. 17 PRIOR ART

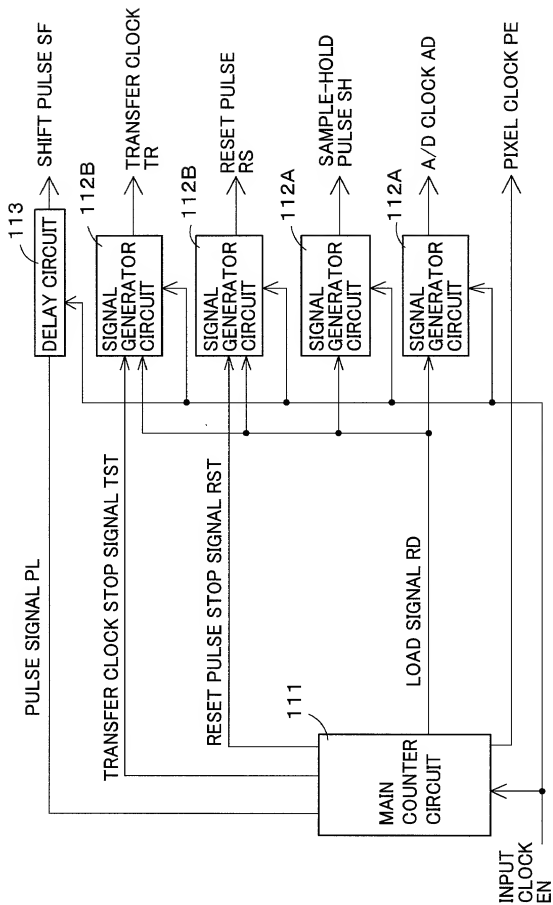


FIG. 18  
PRIOR ART

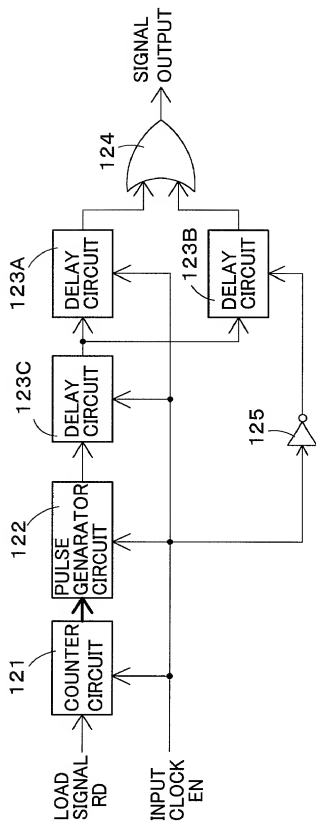
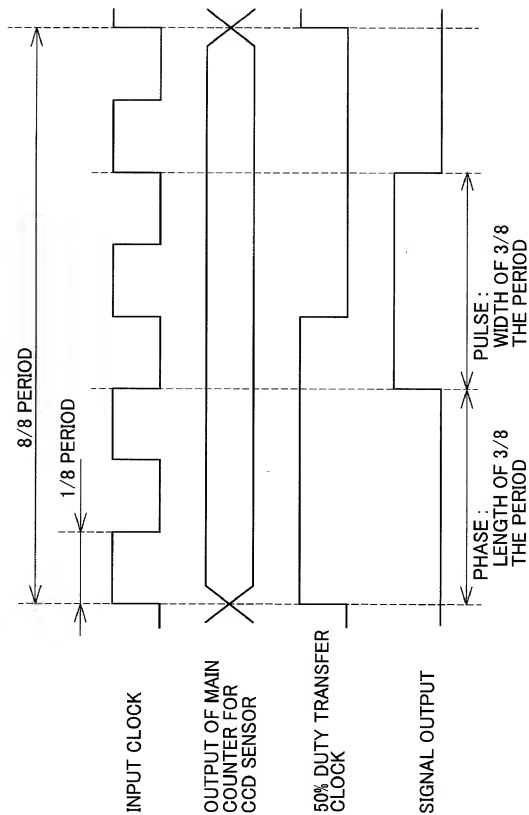


FIG. 19

PRIOR ART



# FIG. 20 PRIOR ART

RELATIONSHIP BETWEEN PHASE SETTING AND  
LOAD VALUE SETTING

PHASE LENGTH	LOAD VALUE
LENGTH OF $0/8 \sim 1/8$ THE PERIOD	0
LENGTH OF $2/8 \sim 3/8$ THE PERIOD	3
LENGTH OF $4/8 \sim 5/8$ THE PERIOD	2
LENGTH OF $6/8 \sim 7/8$ THE PERIOD	1

# FIG. 21 PRIOR ART

RELATIONSHIP BETWEEN PULSE WIDTH SETTING  
AND COMPARATIVE VALUE SETTING

PULSE WIDTH	COMPARATIVE VALUE
WIDTH OF $2/8 \sim 3/8$ THE PERIOD	1
WIDTH OF $4/8 \sim 5/8$ THE PERIOD	2
WIDTH OF $6/8 \sim 7/8$ THE PERIOD	3

FIG. 22  
PRIOR ART

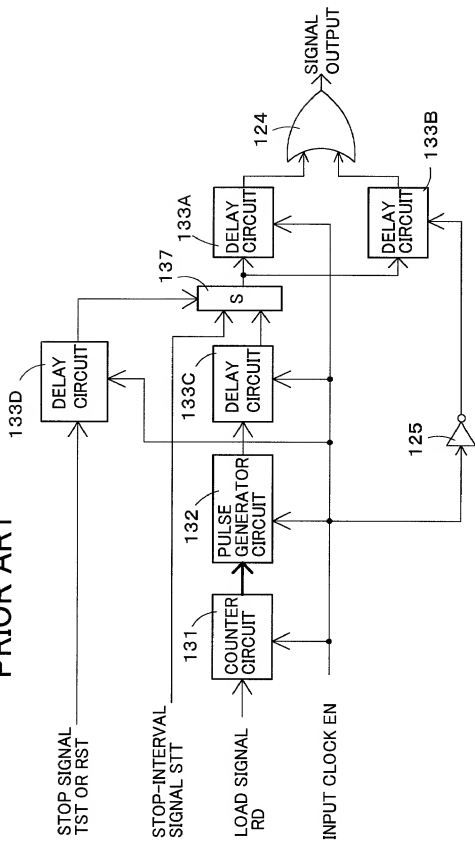
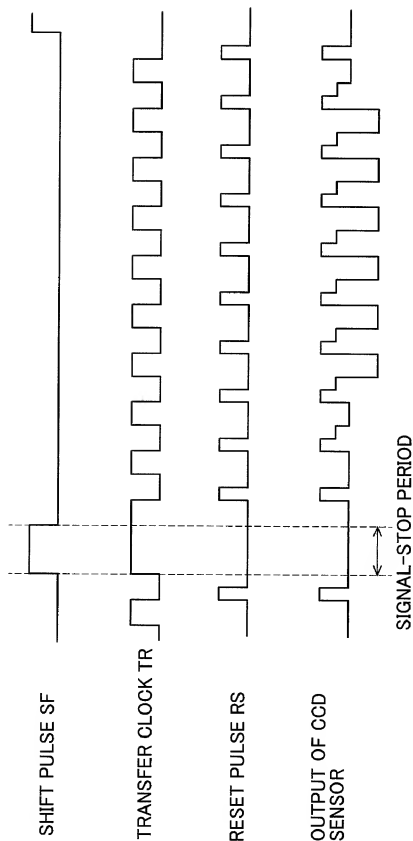
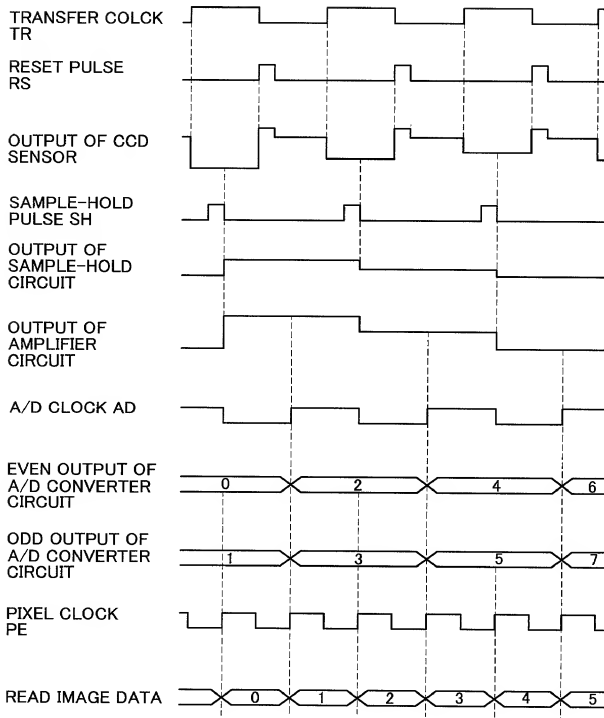


FIG. 23  
PRIOR ART



# FIG. 24

## PRIOR ART



**FIG.25**  
**PRIOR ART**

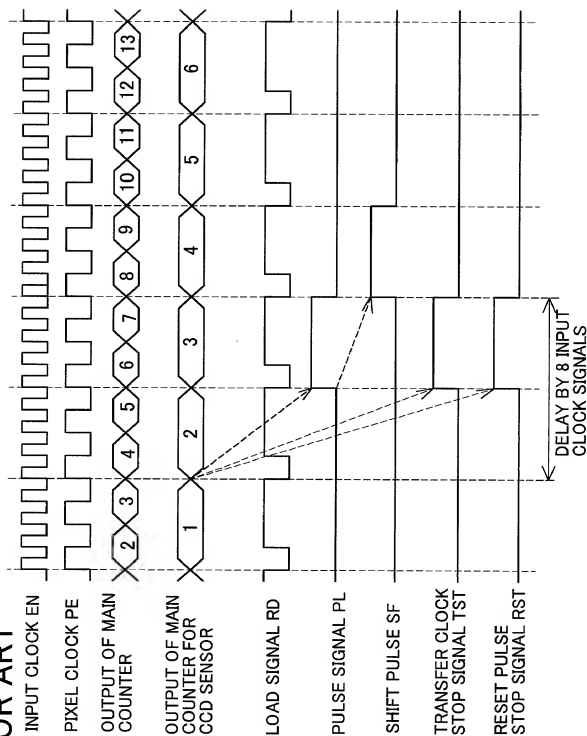




FIG.26 PRIOR ART

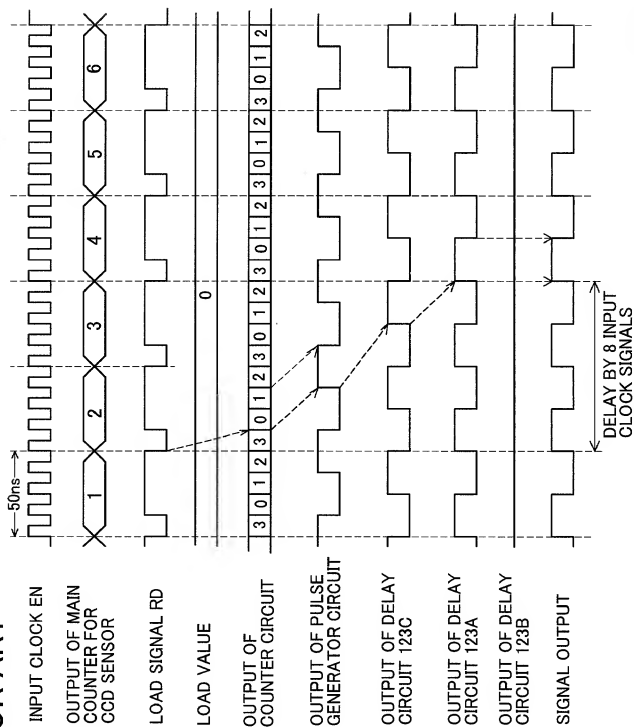


FIG.27 PRIOR ART

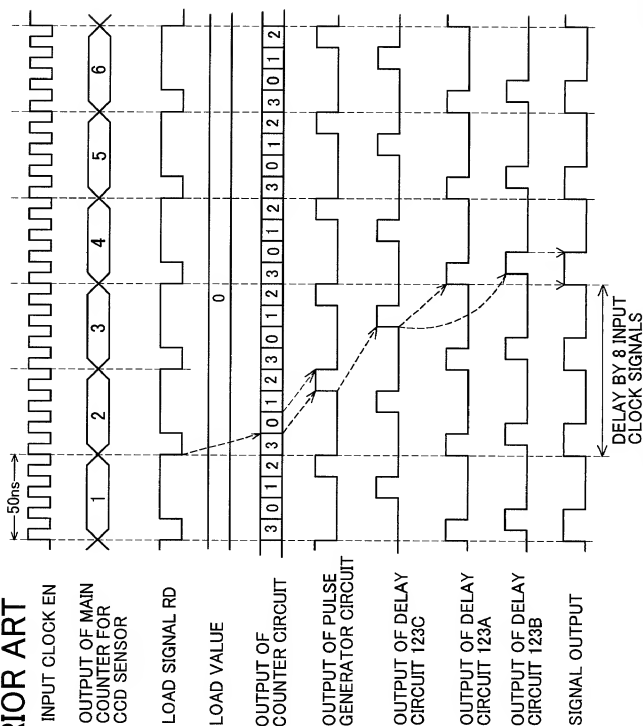
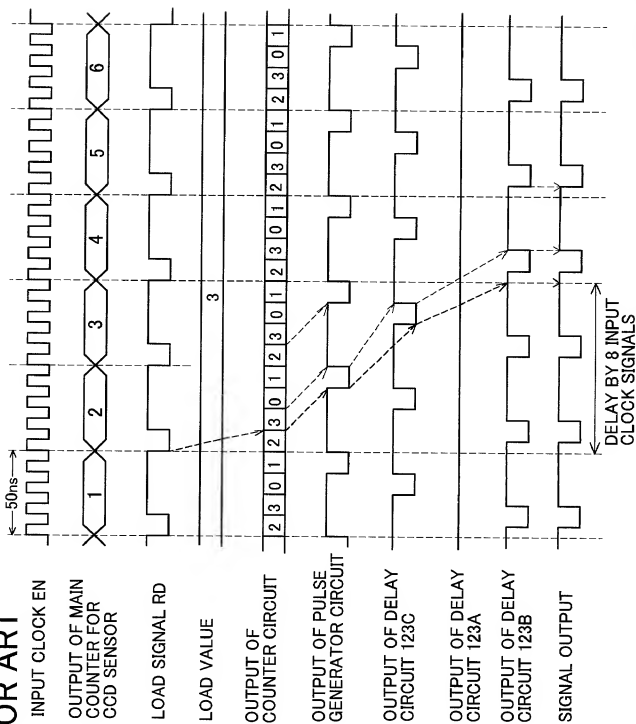
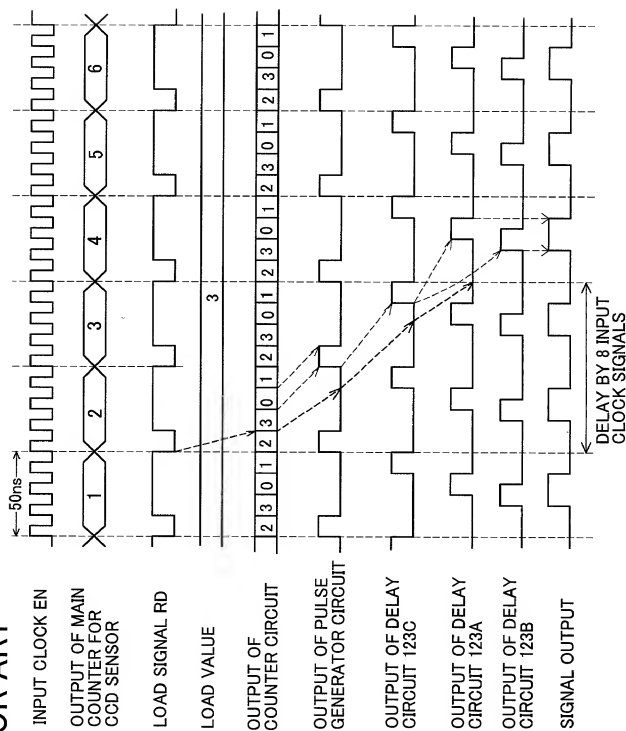


FIG.28 PRIOR ART



# FIG.29 PRIOR ART



# FIG. 30

## PRIOR ART

